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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,607	07/30/2002	John Herbert Wood	17MY-7089	6852
27127	7590	10/08/2003	EXAMINER	
HARTMAN & HARTMAN, P.C. 552 EAST 700 NORTH VALPARAISO, IN 46383			SHEEHAN, JOHN P	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

059

**Office Action Summary**

Application No.

10/064,607

Applicant(s)

WOOD ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-9 and 12-20 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112, 1<sup>st</sup> Paragraph***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 to 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

I. As originally filed the specification disclosed that the expression, "Cb + 0.508Ta" has values of 1.15 to 1.45%. The new claims language, "Cb + 0.508Ta is up to 1.45%" (claim 1, lines 4 and 5 and claim 9, lines 4 and 5) encompasses values of less than 1.15%. Values for this expression of less than 1.15% do not find support in the application as filed and therefore are considered new matter.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 16 to 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. The transitional phrase "consisting of" used in claim 16 limits the claimed alloy to only the recited elements and incidental impurities. Since claim 16 does not recite Ta, then the alloy recited in claim 16 does not contain Ta. However, dependent claim 17 recites that the alloy of claim 16 "is free of tantalum". In view of the fact that claim 16 does not contain Ta, it is not clear what the purpose is for claim 17.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5 to 9 and 12 to 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (Wood, US Patent No. 4,810,467, cited by the applicants in the IDS submitted July 30, 2002).

Wood teaches castable and weldable nickel-based alloys for use in gas turbine nozzle applications (column 1, lines 6 to 10) as recited in applicants' claims. Wood teaches an alloy composition containing the same element components as recited in the instant claims in proportions that overlap the applicants' claimed proportions (column 4,

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Table 2, the column entitled, "Acceptable Melt Chemistry Range"). Applicants' claimed proportions for Co, Cr, W, Al, Ti, B and C are exactly the same as Wood's proportions for these elements. Wood teaches that the strength of the alloy is dependent on the amount of gamma prime forming elements (Al+Ti+Ta+Cb) present in the alloy (column 3, lines 25 to 30) and that to have the necessary strength the alloy should contain about 28 volume percent of the gamma phase (column 3, lines 35 to 40) which gamma content is encompassed by applicants' claims 6 and 13.

Wood and the claimed invention differ in that although teaching the exact same proportions for each of the elements Co, Cr, W, Al, Ti, B and C Wood teaches overlapping proportions for each of Cb and Zr, is silent with respect to the Cb-Ta relationship and requires the use of a minimum of 0.5% Ta.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Wood's alloys, as explained above, have the same utility, the same phase structure and proportions that are exactly the same as applicants for each of the elements Co, Cr, W, Al, Ti, B and C and overlap with respect to each of the remaining elements and therefore are considered to establish a prima facie case of obviousness, In re Peterson 65 USPQ2d 1379 (CAFC 2003, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05. With respect to the Ta content it is the Examiner's position that one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the minimum Ta content of 0.5% taught by the

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reference closely approximates the instantly claimed maximum Ta content of 0.4% and these two values are so close that one would have expected the alloys taught by the references and the claimed alloys to have the same properties, *Titanium Metals v. Banner*, 227 USPQ 773 and MPEP 2144.05.

3. Claims 1, 2, 5 to 9 and 12 to 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw (US Patent No. 4,039,330).

Shaw teaches castable nickel-based alloys for use in gas turbine applications (column 1, lines 5 to 7 and column 7, lines 10 to 15) as recited in applicants' claims, particularly claims 7, 8, 14 and 15. Shaw teaches an alloy composition containing the same element components as recited in the instant claims in proportions that overlap the applicants' claimed proportions (column 1, lines 45 to 59). Shaw teaches that the strength of the alloy is dependent on the co-presence of Al, Ti, Ta and Cb (column 2, lines 4 to 10).

Shaw and the claimed invention differ in that Shaw does not teach the exact same proportions, is silent with respect to the presence of the gamma phase recited in claims 6 and 13 and requires the use of a minimum of 0.5% Ta..

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Shaw's alloys, as explained above, have the same utility and proportions that overlap the instant claims and therefore are considered to establish a prima facie case of obviousness, In re Peterson 65 USPQ2d 1379 (CAFC 2003, In re Geisler 43 USPQ2d

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1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, in view of the fact that Shaw's alloys overlap the instantly claimed alloy, that is, are similar to the instantly claimed alloys, Shaw's alloys would be expected to possess all the same properties as recited in the instant claims including the presence of the gamma phase, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

With respect to the Ta content it is the Examiner's position that one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the minimum Ta content of 0.5% taught by the reference closely approximates the instantly claimed maximum Ta content of 0.4% and these two values are so close that one would have expected the alloys taught by the references and the claimed alloys to have the same properties, Titanium Metals v. Banner, 227 USPQ 773 and MPEP 2144.05.

### ***Response to Arguments***

Applicant's arguments filed July 30, 2003 have been fully considered but they are not persuasive.

Regarding applicants' arguments with respect to the Ta content of the instantly claimed alloy and the alloys taught by Wood and Shaw, it is the Examiner's position that one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the minimum Ta content of 0.5% taught by the reference closely approximates the instantly claimed maximum Ta content of 0.4% and these two values are so close that one would have expected the alloys taught by the references and the claimed alloys to have the same properties, *Titanium Metals v. Banner*, 227 USPQ 773 and MPEP 2144.05.

### ***Allowable Subject Matter***

4. Claims 16 to 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
5. Claims 3, 4, 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



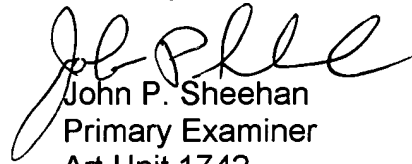
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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps  
October 6, 2003